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Table S1. Ethnicity, sex and age by highest educational attainment in Understanding Society (2013-2015)

Demographics	Highest educational attainment					
	GCSEs and lower		School diploma & other qualifications		Degree/higher	
	N	(%)	N	(%)	N	(%)
Ethnicity						
White	11638	33.7	10424	30.2	12424	35.9
Black	363	25.1	400	27.6	685	47.3
Asian	1106	32.2	877	25.5	1445	42.1
Other ethnicity	201	22.1	235	25.9	472	51.9
Missing	538	36.1	491	33	401	26.9
<i>P value</i>	<0.001					
Sex						
Male	5888	30.5	6388	33.1	6927	35.9
Female	7958	35.3	6039	26.8	8500	37.7
<i>P value</i>	<0.001					
Age						
20-29 years	1462	23.9	2363	38.6	2271	37.1
30-39 years	1653	24.3	1776	26.1	3345	49.2
40-49 years	2433	29.1	2339	28	3570	42.7
50-59 years	2455	32.6	2221	29.5	2822	37.5
60+	5843	44.8	3728	28.6	3419	26.2
<i>P value</i>	<0.001					

Participants from wave 5 (2013-2015) of Understanding Society with data on educational attainment, demographics, and physical activity

Missing = missing data; not displayed where data was available in complete.

P value = χ^2

Table S2. Estimated difference in predicted probability in educational differences in physical activity by age

Physical activity	20-29			30-39			40-49			50-59			60+			education					
	Coef.	95% CI	p	Coef.	95% CI	p	Coef.	95% CI	p	Coef.	95% CI	p	Coef.	95% CI	p	X age					
Active Travel																					
GCSEs and lower	*ref																				
School diploma	-0.03	-0.07	0.01	0.206	-0.04	-0.07	0.00	0.064	-0.01	-0.04	0.02	0.506	-0.03	-0.06	0.00	0.091	-0.04	-0.08	0.01	0.155	0.081
Degree/higher	-0.04	-0.08	0.00	0.044	-0.07	-0.10	-0.04	<0.001	-0.08	-0.10	-0.05	<0.001	-0.07	-0.10	-0.04	<0.001	-0.06	-0.11	-0.01	0.012	
Occupational																					
GCSEs and lower	*ref																				
School diploma	-0.10	-0.14	-0.06	<0.001	-0.14	-0.18	-0.10	<0.001	-0.06	-0.10	-0.03	<0.001	-0.03	-0.07	0.00	0.060	-0.01	-0.06	0.04	0.648	0.001
Degree/higher	-0.25	-0.29	-0.21	<0.001	-0.29	-0.33	-0.26	<0.001	-0.26	-0.29	-0.23	<0.001	-0.24	-0.27	-0.21	<0.001	-0.20	-0.25	-0.15	<0.001	
Moderate-to-vigorous leisure time																					
GCSEs and lower	*ref																				
School diploma	0.09	0.06	0.13	<0.001	0.08	0.04	0.11	<0.001	0.04	0.02	0.07	0.001	0.06	0.04	0.09	<0.001	0.06	0.04	0.08	<0.001	0.008
Degree/higher	0.17	0.14	0.21	<0.001	0.17	0.14	0.20	<0.001	0.16	0.14	0.19	<0.001	0.18	0.16	0.21	<0.001	0.16	0.14	0.18	<0.001	
Light leisure time																					
GCSEs and lower	*ref																				
School diploma	0.02	-0.01	0.04	0.173	0.03	0.00	0.06	0.030	0.04	0.01	0.06	0.002	0.02	-0.01	0.04	0.180	0.06	0.04	0.08	<0.001	<0.001
Degree/higher	0.02	0.00	0.05	0.102	0.03	0.01	0.05	0.007	0.03	0.01	0.06	0.002	0.08	0.06	0.11	<0.001	0.13	0.11	0.15	<0.001	

Estimates are derived from separate logistic regression models of each binary physical activity outcome including a two-way interaction terms (education x age), and show the education-outcome associations on the absolute scale in each sociodemographic sub group

Participants from wave 5 (2013-2015) of Understanding Society with data on educational attainment, demographics, and physical activity

**reference groups*

Table S3. Estimated difference in predicted probability in educational differences in physical activity by sex

Physical activity	Male			Female			education	
	Coef.	95% CI	p	Coef.	95% CI	p	X sex	
Active Travel								
GCSEs and lower	<i>*ref</i>							
School diploma	-0.02	-0.05 0.00	0.050	-0.03	-0.05 0.00	0.027	<0.001	
Degree/higher	-0.03	-0.05 0.00	0.018	-0.10	-0.12 -0.08	0.000		
Occupational								
GCSEs and lower	<i>*ref</i>							
School diploma	-0.06	-0.09 -0.04	<0.001	-0.08	-0.11 -0.06	<0.001	<0.001	
Degree/higher	-0.35	-0.37 -0.32	<0.001	-0.17	-0.19 -0.15	<0.001		
Moderate-to-vigorous leisure time								
GCSEs and lower	<i>*ref</i>							
School diploma	0.06	0.05 0.08	<0.001	0.07	0.05 0.08	<0.001	0.550	
Degree/higher	0.17	0.15 0.18	<0.001	0.17	0.15 0.18	<0.001		
Light leisure time								
GCSEs and lower	<i>*ref</i>							
School diploma	0.03	0.01 0.04	0.001	0.05	0.03 0.06	<0.001	<0.001	
Degree/higher	0.02	0.01 0.03	0.005	0.12	0.10 0.13	<0.001		

Estimates are derived from separate logistic regression models of each binary physical activity outcome including a two-way interaction terms (education x sex), and show the education-outcome associations on the absolute scale in each sociodemographic sub group

Participants from wave 5 (2013-2015) of Understanding Society with data on educational attainment, demographics, and physical activity

**reference group*

Table S4. Estimated difference in predicted probability in educational differences in physical activity by ethnicity

Physical activity	White				Black				Asian				Other ethnicity				education X ethnicity
	Coef.	95% CI		p	Coef.	95% CI		p	Coef.	95% CI		p	Coef.	95% CI		p	P
Active Travel																	
GCSEs and lower	*ref																
School diploma	-0.02	-0.04	0.00	0.013	0.02	-0.08	0.11	0.723	-0.07	-0.13	0.00	0.040	-0.04	-0.17	0.08	0.523	0.038
Degree/higher	-0.06	-0.08	-0.04	<0.001	-0.12	-0.20	-0.05	0.002	-0.11	-0.17	-0.05	<0.001	-0.04	-0.15	0.07	0.465	
Occupational																	
GCSEs and lower	*ref																
School diploma	-0.08	-0.10	-0.06	<0.001	-0.03	-0.12	0.06	0.526	-0.07	-0.13	0.00	0.035	-0.04	-0.17	0.08	0.502	0.155
Degree/higher	-0.27	-0.29	-0.25	<0.001	-0.14	-0.22	-0.06	0.001	-0.18	-0.24	-0.13	<0.001	-0.19	-0.30	-0.08	0.001	
Moderate-to-vigorous leisure time																	
GCSEs and lower	*ref																
School diploma	0.06	0.05	0.08	<0.001	0.02	-0.04	0.08	0.488	0.09	0.06	0.12	<0.001	0.12	0.04	0.20	0.004	0.001
Degree/higher	0.17	0.16	0.19	<0.001	0.06	0.01	0.12	0.030	0.16	0.13	0.19	<0.001	0.13	0.06	0.20	<0.001	
Light leisure time																	
GCSEs and lower	*ref																
School diploma	0.04	0.02	0.05	<0.001	0.05	0.00	0.09	0.046	0.04	0.01	0.07	0.008	0.08	0.01	0.14	0.026	0.057
Degree/higher	0.07	0.06	0.08	<0.001	0.02	-0.02	0.06	0.351	0.07	0.05	0.10	<0.001	0.12	0.06	0.17	<0.001	

Estimates are derived from separate logistic regression models of each binary physical activity outcome including a two-way interaction terms (education x ethnicity), and show the education-outcome associations on the absolute scale in each sociodemographic sub group

Participants from wave 5 (2013-2015) of Understanding Society with data on educational attainment, demographics, and physical activity

**reference group*

Table S5. Unadjusted associations (OR (95% CI)) of education and demographics with domain specific PA (complete case analysis)

Physical Activity																	
Active travel					Occupational					Leisure							
N=18,404					N=22,287					Moderate-to-vigorous				Light			
95% CI					95% CI					95% CI				95% CI			
p					p					p				p			
OR					OR					OR				OR			
95% CI					95% CI					95% CI				95% CI			
p					p					p				p			
Education																	
GCSEs and lower	*ref																
School diploma	0.86	0.77	0.96	0.006	0.75	0.69	0.81	<0.001	1.59	1.50	1.69	<0.001	1.23	1.16	1.31	<0.001	
Degree/higher	0.62	0.55	0.68	<0.001	0.35	0.33	0.38	<0.001	2.55	2.41	2.69	<0.001	1.41	1.33	1.50	<0.001	
Ethnicity																	
White	*ref																
Black	0.89	0.71	1.13	0.358	1.87	1.59	2.20	<0.001	0.84	0.75	0.95	0.005	0.38	0.31	0.45	<0.001	
Asian	1.07	0.92	1.25	0.388	1.38	1.23	1.55	<0.001	0.74	0.68	0.81	<0.001	0.47	0.42	0.52	<0.001	
Other ethnicity	1.25	0.97	1.61	0.080	1.20	0.99	1.44	0.061	1.08	0.94	1.25	0.277	0.66	0.55	0.80	<0.001	
Sex																	
Male	*ref																
Female	1.09	1.01	1.19	0.033	0.99	0.94	1.05	0.822	0.85	0.82	0.89	<0.001	1.17	1.12	1.23	<0.001	
Age																	
20-29 years	*ref																
30-39 years	0.75	0.65	0.85	<0.001	0.68	0.62	0.75	<0.001	1.01	0.93	1.09	0.875	1.05	0.95	1.16	0.353	
40-49 years	0.68	0.60	0.77	<0.001	0.69	0.63	0.76	<0.001	0.84	0.78	0.90	<0.001	1.38	1.25	1.51	<0.001	
50-59 years	0.76	0.67	0.87	<0.001	0.78	0.71	0.85	<0.001	0.60	0.56	0.65	<0.001	1.56	1.42	1.71	<0.001	
60+ years	0.70	0.58	0.83	<0.001	0.88	0.79	0.99	0.034	0.43	0.39	0.46	<0.001	1.64	1.50	1.80	<0.001	

Participants from wave 5 (2013-2015) of Understanding Society with data on educational attainment, demographics, and physical activity

Samples were restricted to those with valid demographic and physical activity data

Active travel to work: non-active/active; Occupational: non-physical/physical; Leisure-time: <weekly/ ≥ 1x weekly*reference groups

OR= Odds Ratio, CI= 95% Confidence intervals

Table S6. Unadjusted associations (OR (95% CI)) of education and demographics with domain specific PA (maximum available samples)

Physical Activity																			
Active travel						Occupational				Leisure									
										Moderate-to-vigorous				Light					
	N	OR	95% CI	p		N	OR	95% CI	p		N	OR	95% CI	p	N	OR	95% CI	p	
Education																			
GCSEs and lower	18535	*ref				22431					41700				41700				
School diploma		0.86	0.77	0.96	0.006		0.75	0.69	0.81	<0.001		1.59	1.50	1.69	<0.001	1.23	1.16	1.31	<0.001
Degree/higher		0.62	0.55	0.69	<0.001		0.35	0.33	0.38	<0.001		2.56	2.43	2.70	<0.001	1.43	1.35	1.52	<0.001
Ethnicity																			
White	18430	*ref				22317					40364				40364				
Black		0.89	0.71	1.13	0.360		1.87	1.59	2.20	<0.001		0.84	0.75	0.95	0.005	0.38	0.31	0.45	<0.001
Asian		1.07	0.92	1.25	0.385		1.38	1.23	1.55	<0.001		0.74	0.68	0.81	<0.001	0.47	0.42	0.52	<0.001
Other ethnicity		1.25	0.97	1.61	0.080		1.20	0.99	1.44	0.062		1.08	0.94	1.25	0.282	0.66	0.55	0.80	<0.001
Sex																			
Male	18568	*ref				22470					41853				41853				
Female		1.09	1.00	1.18	0.039		0.99	0.94	1.04	0.688		0.90	0.86	0.93	<0.001	1.22	1.17	1.28	<0.001
Age																			
20-29 years	18568	*ref				22470					41853				41853				
30-39 years		0.74	0.65	0.85	<0.001		0.68	0.62	0.75	<0.001		1.04	0.96	1.12	0.380	1.07	0.97	1.18	0.192
40-49 years		0.68	0.60	0.77	<0.001		0.69	0.63	0.75	<0.001		0.87	0.81	0.94	<0.001	1.40	1.28	1.54	<0.001
50-59 years		0.76	0.67	0.87	<0.001		0.77	0.71	0.84	<0.001		0.63	0.59	0.68	<0.001	1.58	1.45	1.74	<0.001
60+ years		0.70	0.59	0.84	<0.001		0.88	0.79	0.99	0.031		0.45	0.42	0.48	<0.001	1.69	1.54	1.84	<0.001

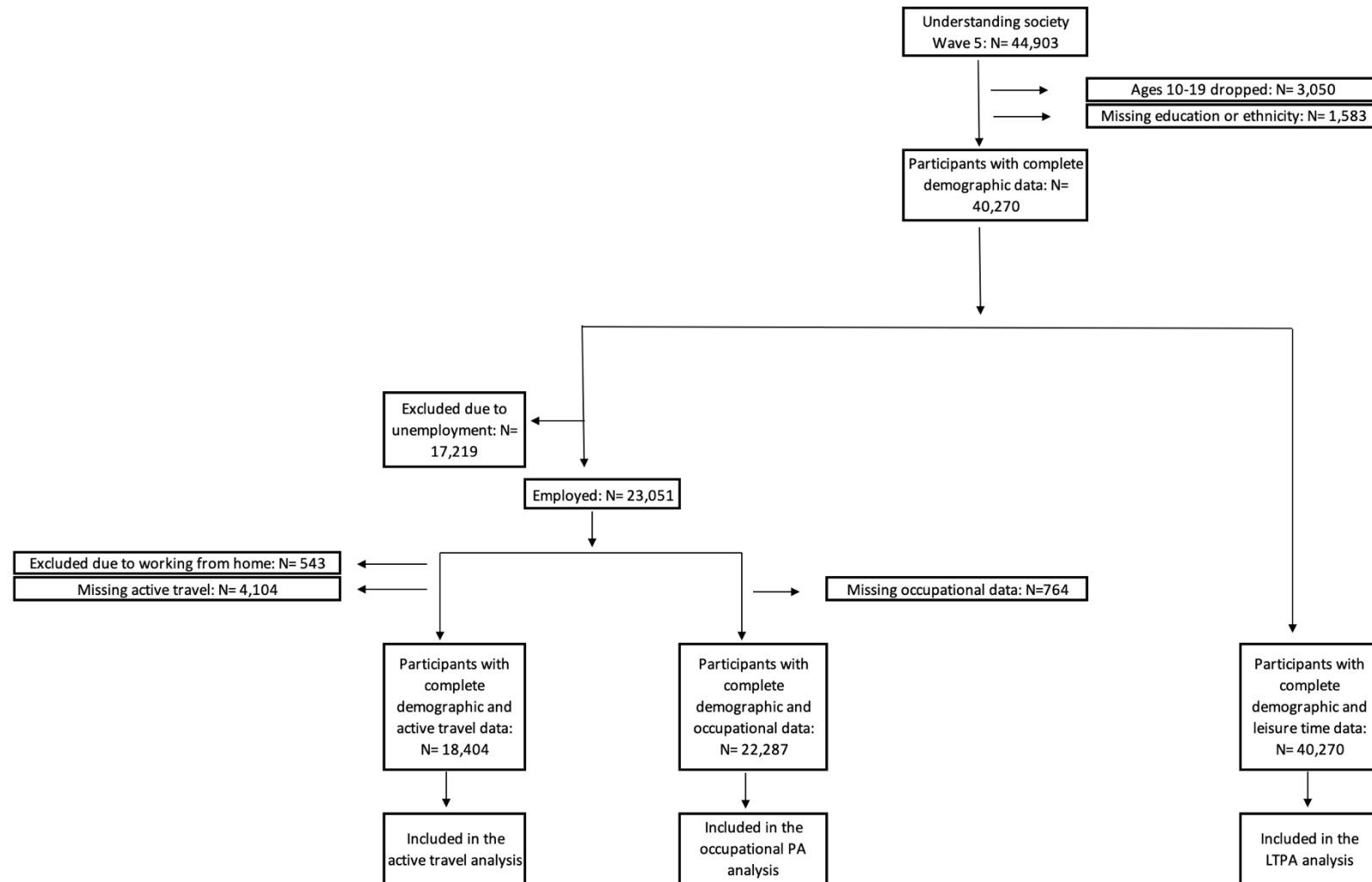
Participants from wave 5 (2013-2015) of Understanding Society with data on educational attainment, demographics, and physical activity

Sample size was not restricted and represents total available sample

Active travel to work: non-active/active; Occupational: non-physical/physical; Leisure-time: <weekly/ ≥ 1x weekly*reference groups

OR= Odds Ratio, CI= 95% Confidence intervals

Figure S1. Flow diagram of analyses in Understanding Society



There was no missing data for sex and age demographics.

Active travel and occupational physical activity only include individuals who are currently employed, due to questionnaire routing.